UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
AIR AND RADIATION DIVISION
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Inspection Under the National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities 40 CFR 61, Subpart H

I. FACILITY IDENTIFICATION

A. Facility Location

Portsmouth Gaseous Diffusion Plant
3930 U.S. Route 23 South
Piketon, Ohio 45661

B. Responsible Official

USEC — T. Michael Taimi, Environmental Assurance and Policies Manager
Phone: (301) 564-3409

II. DATE OF INSPECTION

October 19-22, 1998

III. PARTICIPANTS

A. Facility
Steven B. Guthrie, USEC; Robert Blythe, LMUS; Larry Zonner, LMUS; William Gundlah, LMUS; Kathy Easter, LMUS

B. USEPA
Michael H. Murphy, USEPA Region 5

IV. ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
APC	Air Pollution Control
BE	Building exhaust

BRF	Bureau of Radiation Protection
CDO	Central District Office
CFR	Code of Federal Regulations
cpm	Counts per minute
DAPC	Dayton Air Pollution Control or Division of Air Pollution Control
DMR	Discharge Monitoring Report
DQO	Data Quality Objective
EML	Environmental Measurements Laboratory
EMSL-LV	Environmental Monitoring Systems Laboratory at Las Vegas
FFCA	Federal Facility Compliance Agreement
g	Grams
Ge(Li)	Germanium Lithium detection probe
HASA	High Assay Sampling Area
IPO	Initial Public Offering
KeV	Kilo electron volts (1000 electron volts)
km	Kilometer(s)
LMES	Lockheed Martin Energy Systems (formerly MMES)
LMUS	Lockheed Martin Utility Services (formerly MMUS)
M&A	Merger and Acquisition
μm	Micrometer, Micron (0.000001 meter)
MDL	Minimum detection Limit
MMES	Martin Marietta Energy Systems

MMUS	Martin Marietta Utility Systems
mph	Miles Per Hour
N/A	Not Applicable or Not Available
NAREL	National Air and Radiation Environmental Laboratory
NESHAP	National Emission Standard for Hazardous Air Pollutants
NOAA	National Oceanographic and Atmospheric Administration
ODH	Ohio Department of Health
OEPA	Ohio Environmental Protection Agency
OFFO	Office of Federal Facility Oversight
PAT	Proficiency Analysis Testing Program
PET	Proficiency Environmental Testing Program
PORTS	Portsmouth Gaseous Diffusion Plant
QA	Quality Assurance
QAPjP	Quality Assurance Project Plan
QC	Quality Control
SC&A	Sanford Cohen and Associates
SEDO	Southeast District Office
SOPs	Standard Operating Procedures
Tc-99	Technetium-99
TRU	Transuranic materials
U-235	Uranium-235
USDOE	United States Department of Energy
USEC	United States Enrichment Corporation

USEPA	United States Environmental Protection Agency
USU	New York Stock Exchange Ticker Symbol for USEC
WP	Water Pollution Performance Evaluation Study

V. OBJECTIVE/SCOPE OF INSPECTION

The scope of this inspection was to perform a walk through of the sampling systems for the NESHAPs compliance demonstration and specifically the X-705 Decontamination facility for USEC. All sampling systems and exit points on the process buildings will be evaluated to address allegations of unreported emissions that could endanger the public health and the environment. Additionally, data from the meteorological tower will be evaluated for completeness. There will be an evaluation of the data for the diffuse emissions for the site that is under the USDOE's oversight along with areas during the walk through that impact upon the emissions attributable to USDOE.

VI. FACILITY DESCRIPTION

The following site description is quoted from the Calendar Year 1995 annual report submitted to the USEPA on June 24, 1996.

The Portsmouth Gaseous Diffusion Plant (PORTS) is owned by the Department of Energy (DOE). PORTS was operated by DOE and managed by Martin Marietta Energy Systems, Inc., until July 1, 1993. In 1992 Congress passed legislation amending the Atomic Energy Act of 1954 to create the United States Enrichment Corporation (USEC). A government corporation similar to the Tennessee Valley Authority, to operate the uranium enrichment enterprise in the United States. The new corporation began operation on July 1, 1993. In accordance with the Act, USEC leased all production facilities at PORTS and its sister plant at Paducah, Kentucky, from DOE. DOE retained operational control of all waste storage and handling facilities as well as all sites undergoing environmental restoration.

The PORTS site is located in sparsely populated, rural Pike County, Ohio, on a 16.2-km^2 (6.3-mile^2) site about 1.6 km (1 mile) east of the Scioto River Valley at an elevation of approximately 36.6 m (120 ft) above the Scioto River floodplain. The terrain surrounding the plant, except for the Scioto River floodplain, consists of marginal farmland and densely forested hills. The Scioto River floodplain is farmed extensively, particularly with grain crops.

Pike County has a generally moderate climate. Winters in Pike County are moderately cold, and summers are moderately warm and humid. The precipitation is usually well distributed with fall being the driest season. Prevailing winds at the site are out of the southwest to south. Average wind speeds are about 5 mph (8 km/h) although winds of up to 75 mph (120 km/h) have been recorded at the plantsite. Usually high winds are associated with thunderstorms that occur in spring and summer. Southern Ohio is within the midwestern tornado belt although no tornados have struck the plantsite to date.

Pike County has approximately 23,000 resident. Scattered rural development is typical; however, the county contains numerous small villages such as Piketon, Wakefield, and Jasper, which lie within a few kilometers of the plant. The county's largest community, Waverly, is about 19 km (12 miles) north of the plantsite and has a population of approximately 5,100 residents. Additional population centers within 80 km (50 miles) of the plant are Portsmouth (population 25,500), Chillicothe (population 23,420), and Jackson (population 6,675). The total population of the area lying within an 80-km (50-mile) radius of the plant is approximately 600,000.

USEC is responsible for the principal site process and support operations. The principal site process is the separation of uranium isotopes through gaseous diffusion. Support operations include the feed and withdrawal of material from the primary process, treatment of water for both potable and cooling purposes, steam generation for heating purposes, decontamination of equipment removed from the process for maintenance or replacement, recovery of uranium from various waste materials, and treatment of industrial wastes generated onsite. DOE is responsible for the decontamination activities in the X-326 building, X-326 "L-Cage" and its glovebox, X-345 high assay sampling area (HASA), X-744G glovebox and site remediation activities. The emissions from the DOE sources listed in this report represent 13% of the air emissions from the USEC Source one (X-326 Top Purge, Side Purge and E-jet vents), 13% of the emissions from the Seal Exhaust (SE) 6 (which is part of USEC Source two), and all of the emissions from DOE sources one (X-326 SE 5 Vent) and two (X-345 HASA).

Additional information was supplied regarding the privatization of USEC and the PORTS facility as of November 3, 1998. This information is from the "About Privatization" Factsheet dated August 24, 1998.

The Energy Policy Act of 1992 created the United States Enrichment Corporation (USEC), a wholly-owned government corporation, as a first step in transferring the uranium enrichment business to the private sector. The Act transferred the U. S. Department of Energy's uranium enrichment enterprise to USEC with the requirement that "within two years after the transition date, the Corporation shall prepare a strategic plan for transferring ownership of the corporation to private investors."

USEC began operation July 1, 1993, and on June 30, 1995, presented President Bill Clinton and Congress with the corporation's plan for privatization. On April 26, 1996, the USEC Privatization Act was signed into law.

On July 25, 1997, President Clinton approved the initiation of the USEC privatization. In January 1998, a dual-path privatization process was implemented when the Board agreed to consider simultaneously a direct sale to the public through an Initial Public Offering (IPO) and a merger and acquisition (M&A) process.

After an exhaustive examination of both options, the Board announced on June 29, 1998 that the IPO option would best meet the statutory criteria, provisions and requirements governing the sale. The company then proceeded with a stock sale under the guidance of Transaction Manager Morgan Stanley Dean Witter. The process culminated with the U.S. Treasury's approval of the sale, the transfer to the Treasury of the proceeds of the sale, and the listing of the company on the New York Stock Exchange under the symbol USU in July 1998.

Following privatization, USEC, Inc. is building its customer-oriented approach to business and maintaining its position as a strong competitor in the global marketplace.

As of March 3, 1997, the Nuclear Regulatory Commission assumed regulation of USEC's nuclear related operations previously regulated by USDOE. The regulation of USEC's nuclear emissions as it applies to the NESHAPs regulations remains with USEPA.

VII. INSPECTION FINDINGS

This inspection was of limited scope due to a single investigator being available to conduct this inspection.

GENERAL FINDINGS

Minor problems with the meteorological tower equipment and the data collected during this period were found. It was reported by USEC and LMUS personnel that these problems were being addressed. There were a few instances in which corrected data had not been initialed and/or dated. It was stated that this issue would be addressed by heightening the awareness of the appropriate personnel for the need for this procedure.

SPECIFIC FINDINGS

Allegations had been made that a "yellow powder" could be readily found around sampling points and at exhaust points that were supposed to be monitored. If true, this could indicate serious deficiencies in procedures and monitoring equipment. After careful examination of the areas that this would have potentially occurred, no evidence could be found to support these allegations. Additionally, reports and monitoring data for these areas were examined for any discrepencies that could be linked with the allegations. Once again, no evidence could be found to substantiate the allegations at this time.

Appendix A
USEC Comments

USEC COMMENTS TO THE USEPA REGION 5 DRAFT REPORT FOR THE NESHAP INSPECTION CONDUCTED OCTOBER 19-22, 1998

1. **Section II, Date of Inspection:**

   The inspection was conducted during October 19-22, 1998, not October 19-27, 1998.

2. **Section IV, Acronyms and Abbreviations Used in This Report:**

   a. The following acronyms and abbreviations were omitted from the list:

IPO	Initial public offering
km	Kilometers
M&A	Merger and acquisition
mph	Miles per hour
USU	New York Stock Exchange ticker symbol for USEC

   b. Delete those acronyms and abbreviations not referenced in the report: ANSI, APC, BE, BRP, CDO, cpm, DAPC, DMR, DQO, EML, EMSL-LV, FFCA, Ge(Li), KeV, LMUS, µm, MDL, MMUS, N/A, NAREL, NOAA, ODH, OEPA, OFFO, PAT, PET, QA, QAPjP, QC, SC&A, SOPs, Tc-99, TRU, U-235, and WP.

3. **Section V, Objective/Scope of Inspection:**

   "...Scope..." should not be capitalized in the first sentence.

4. **Section VI, Facility Description**

   a. Change "...23,000 resident..." to "...23,000 residents..." in the fifth paragraph.

   b. Delete last sentence in the sixth paragraph which makes reference to the percentage of emissions attributable to DOE.

   c. In the seventh paragraph, "...information Supplied..." should read "...information was supplied..."

   d. It is suggested that a statement be included in this section that the Nuclear Regulatory Commission, as of March 3, 1997, regulates USEC's nuclear-related operations.

Appendix B
USEPA Region 5 Response to Comments

RESPONSE TO THE USEC COMMENTS TO THE USEPA REGION 5 DRAFT REPORT FOR THE NESHAP INSPECTION CONDUCTED OCTOBER 19-22, 1998

1. Section II, Date of Inspection

   The inspection was conducted during October 19-22, 1998, not October 19-27, 1998.

Response:

The typographical error was corrected to reflect the correct time period for the inspection.

2. Section IV, Acronyms and Abbreviations Used in This Report:

   a. The following acronyms and abbreviations were omitted from the list:

IPO	Initial Public Offering
km	Kilometer
M&A	Merger and Acquisition
mph	Miles Per Hour
USU	New York Stock Exchange Ticker Symbol for USEC

Response:

These acronyms and abbreviation were added to the listing and the section title was revised to read Acronyms and Abbreviations.

   b. Delete those acronyms and abbreviations not referenced in the report: ANSI, APC, BE, BRP, CDO, cpm, DAPC, DMR, DQO, EML, EMSL-LV, FFCA, Ge(Li), KeV, LMUS, μm, MDL, MMUS, N/A, NAREL, NOAA, ODH, OEPA, OFFO, PAT, PET, QA, QAPjP, QC, SC&A, SOPs, Tc-99, TRU, U-235, and WP.

Response:

These acronyms and abbreviations were left in this report due to historical use in most previous reports, as well as the potential to revise this report further with regard to quality assurance with regard to the meteorological tower and the data outputs reviewed and commented upon at the close out meeting.

3. Section V, Objective/Scope of Inspection:
   "...Scope..." should not be capitalized in the first sentence.

Response:

This typographical error has been corrected.

4. Section VI, Facility Description

a. Change "...23,000resident..." to 23,000 residents..." in fifth paragraph.

Response:

This is a direct quote from the referenced document, though grammatically incorrect is part of the direct quote.

b. Delete last sentence in the sixth paragraph which makes reference to the percentage of emissions attributable to DOE.

Response:

See response for 3, a.

c. In the seventh paragraph, "...information Supplied..." should read "...information was supplied..."

Response:

This correction was made and incorporated into the document.

d. It is suggested that a statement be included in this section that the Nuclear Regulatory Commission, as of March 3, 1997, regulates USEC's nuclear-related operations.

Response:

Agreed. A statement was included to indicate the changes in regulatory authorities.